

Never Waste a Good Crisis: Towards Social Sustainable Development

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Abstract The report by the Stiglitz Commission on the Measurement of Economic Performance and Social Progress highlighted the idea that sustainability in essence is about quality of life. This paper discusses and elaborates this notion. It argues that sustainable development should be seen as a process which does not focus on economic development alone, but which also includes well-balanced ecological and social development. Social aspects of sustainability deserve attention because of their instrumental and intrinsic relevance. A society needs a sense of community and commitment. The presence of social capital is very important for the liveability of a society. It is argued that the amount of social capital may fluctuate over time. This means that in the long term, future societies may be better in a social respect (more trust, more participation, less inequality) than today's. Ensuring social sustainability is thus not only a matter of ensuring that present social cohesion is preserved, but also ensuring that this cohesion will increase or improve. The paper ends by addressing lines of research on social sustainability. The following research themes are mentioned: (1) Quality of life, social capital and social cohesion in a longitudinal perspective. (2) 'Sustainability of what, why and for whom?' Sustainability as an issue of choice: trade-offs. (3) Civil society and governance aspects of sustainability. (4) Public perceptions, values and opinions with regard to sustainability issues and (5) Fairness and inequality in relation to sustainability policy, both nationally and internationally.

Keywords Sustainability · Quality of life · Social capital · Monitoring

'Sustainability' and 'sustainable development' are notions that have gained considerable currency in the Netherlands in recent years in both the public debate and government policy. In most cases, that debate focuses primarily on ecological issues: when people talk about sustainable development of the earth and the threats humanity faces in this regard, they are usually talking about the natural environment, climate change, CO₂ emissions, the threats to biodiversity and the wastage and pollution of soil, water and air. From this

Developing a research agenda for the social aspects of sustainable development.

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perspective, sustainable use of natural resources means striking a balance in which those resources are used at a rate that does not exceed the rate at which the earth is able to replace them.

When it comes to the sustainable development of society, however, the scope is much broader. Here, sustainable development is concerned with the future of life and society and with people's welfare, with the continuation of society in a way which ensures that the present generation leaves enough scope for successive generations and people elsewhere in the world to enjoy a good quality of life. The ecological aspect—the sustainable management of nature—is an important parameter in this context, alongside economic determinants. At its heart, sustainability is a concept which accords central status to quality of life for present and future generations, at home and abroad.

1 Brief Conceptual Discussion

The *Report by the Commission on the Measurement of Economic Performance and Social Progress* was published on 14 September 2009 (Stiglitz et al. 2009). It was compiled at the request of French president Sarkozy by a Commission led by the Nobel Prize-winners Joseph Stiglitz and Amartya Sen and the French economist Jean-Paul Fitoussi. Sarkozy was prompted to set up the Commission because of his dissatisfaction with the available statistical information on the economy and society. The report attracted a great deal of international attention from economists, social scientists, politicians and policymakers. Based on an in-depth study of the literature from various scientific disciplines, the report argues convincingly that the traditional methods of measuring social development using economic indicators leave much to be desired. The core message of the report is that the time is ripe to move away from assessing social progress exclusively by measuring a society's economic output—usually expressed in Gross Domestic Product—and to devote explicit attention to measuring the well-being of citizens. The report moreover argues that well-being should be measured from the perspective of sustainability.

The report shows clearly that these three topics—economic elements, well-being and sustainable development—are closely interrelated. In order to gain a clearer picture of how society is developing, the authors put forward a number of recommendations, including the following:

- As regards the *material well-being* of citizens, there is a need to switch attention towards information on income, consumption and assets, and to place less emphasis on production. Moreover, income measures need to be broadened to include non-market activities, such as informal care and child care as well as other forms of economic activity. It is also important to devote attention to the (unequal) distribution of income, consumption and assets.
- Well-being (referred to in the report as *quality of life*) includes both objective and subjective aspects. The report distinguishes between the following dimensions:
 1. material living standards (income, consumption and assets);
 2. health;
 3. education;
 4. personal activities, including work;
 5. political voice and governance;

6. social connections and relationships;
7. environment (present and future conditions);
8. insecurity, both of an economic as well as a physical nature.

All these dimensions are important components of people's well-being, but many of them are ignored by the conventional income measures.

- The central question with regard to *sustainability* is whether well-being can be maintained in the long term at a level which will afford both present and future generations the opportunity to enjoy a good quality of life. Sustainability requires that various 'stocks' of natural resources, as well as of human, social and natural capital, be maintained or increased. We shall return to this later.

Although the Stiglitz report attracted a great deal of attention worldwide, it was by no means the first publication on this theme, and the thoughts expressed in it are also not entirely new. The report cannot be seen in isolation from the major problems currently confronting the world: climate change, the global financial crisis, social unrest. All this has fuelled strong criticism of the use of indicators such as GDP as the primary means of measuring social development. The Stiglitz report simply appeared at the right time and the ideas it presented fell on fertile ground.

There is however no doubt that the central idea expounded in the Stiglitz report is extremely worthwhile: in essence, sustainability is about quality of life; the question then is how we can measure that quality of life, and in particular how we can measure its sustainable development. Economic prosperity is of course part of—or a condition for—quality of life. The same applies for ecological sustainability. Combating climate disturbances, maintaining biodiversity, combating pollution and wastage of soil, water and air, are all key to maintaining good quality of life in the longer term. On the one hand, preserving the natural environment has value in and of itself, so that people can enjoy it as users, professionally or as tourists, while on the other the natural environment (natural capital) is a necessary precondition for the continued existence of humankind as a resource for the production of food, fuels, building materials, etc.

International organisations have now also engaged with the question of how social well-being and social development can be defined and measured. As early as 2002, the European Commission developed its *European Strategy for Sustainable Development* (EC 2002). That document formulated a number of goals, mainly in the field of ecology and countering health threats, while a number of governance measures were proposed to promote sustainability policy. At that time, not much attention was given to the social dimension of sustainability. This changed in 2009, when the European Commission published the document *GDP and beyond. Measuring progress in a changing world* (EC 2009). The EC argues that GDP is a powerful and widely accepted indicator for monitoring short and medium-term fluctuations in economic activity, especially in the current period of economic malaise; despite all its shortcomings, GDP still offers the best means of measuring how the market economy is performing. But GDP is not designed to measure economic and social progress in the long term, and especially not to indicate a society's ability to tackle problems such as climate change, efficient use of resources, or social inclusion. It is therefore necessary to supplement GDP with information that provides an insight into the other economic, social and environmental aspects that are of key importance for the well-being of citizens.

The OECD echoes this message in its recently published report *Measuring and fostering well-being and progress: the OECD Roadmap* (OECD 2009). This report is a product of

the OECD World Forums on Statistics, Knowledge and Policies, which have been organised since 2004 and which gave rise to a Global Project on Measuring the Progress of Societies, aimed at improving the statistical information on citizens' well-being. The OECD takes as its starting point that economic resources are not the only important elements in people's lives; in order to 'capture' well-being accurately, other things need to be measured as well: individuals' expectations and degree of satisfaction; the way in which they spend their time; their paid and unpaid activities; their health and educational status; their relationships with other people; their political activity; and their participation in public life. However, all kinds of inequality also need to be considered, such as inequality in income, wealth, health status, education level and political voice. The OECD has accepted the request from the French government that it be the international focal point for the further steps that ensue from the recommendations by the Stiglitz-Sen-Fitoussi Commission.

In the Netherlands, the Netherlands Bureau for Economic Policy Analysis (CPB) produced a memorandum in September 2009 for the Minister of Economic Affairs, under the title 'Broad prosperity and national income' (*Brede welvaart en nationaal inkomen*) (CPB 2009). The memorandum explores the opportunities and constraints for applying a broader concept of wealth than national income alone in policy analyses focusing on social prosperity. After describing the limitations of national income and related variables such as gross domestic product (GDP) as a measure of wealth and well-being, CPB introduces the idea of 'broad prosperity'.

Prosperity has different meanings for different people. For some, building new roads is an expression of growth in broad prosperity, a sign of investment in the future. For others, it means additional natural amenities or more free time, while yet others regard greater security for their (great) grandchildren as a key indicator of prosperity. Despite these differences, however, there are also many correspondences in people's views on prosperity (CPB 2009, p. 8).

1. The first component is the prosperity that derives from market goods and government services—in other words, the prosperity that stems from having enough food, somewhere to live, a right to education and health care, security, being able to go on holiday, etc. This is the prosperity that is measured using national income.
2. Then there are scarce goods and services which do not have a market price but which are still important for our prosperity. They include biodiversity, landscape quality, quality of the urban environment, the fruits of voluntary work, etc.
3. Non-economic factors that are important for the way in which prosperity is perceived. These include social relationships, trust, social cohesion, health, happiness, etc.

The discussions on broad prosperity (and how it should be measured) are concerned chiefly with the importance of non-market components of prosperity, such as nature, environment, social cohesion, leisure time and happiness. However, these discussions also emphasise both the long-term consequences and the international dimension of our actions here in the Netherlands. What are the consequences of those actions for subsequent generations and for people outside the Netherlands? In this sense, the drive for broad prosperity is sometimes used as a synonym for sustainable development as defined by the *Brundtland Commission* (WCED 1987): "*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*"

The Brundtland Commission report *Our common future*, published in 1987, established a link between poverty and development. The report acknowledged that poverty poses a

practical obstacle to the sustainable use of the physical environment and that integration of nature management and economic development is a necessary condition for sustainable development. This marked a shift from the purely ecologically inspired notion of ‘sustainability’ to the more socioeconomically inspired concept of ‘sustainable development’.

1.1 Sustainability Monitor for the Netherlands

In 2008 the Dutch government asked Statistics Netherlands (CBS) and three government advisory bodies—The Netherlands Institute for Social Research/SCP, the Netherlands Bureau for Economic Policy Analysis (CPB) and the Netherlands Institute for Research on the Living Environment (PBL)—to develop a *Sustainability Monitor for the Netherlands* (*Monitor Duurzaam Nederland*). The Monitor was published in 2009 (CBS, CPB, PBL, SCP 2009) and reveals where things are going well and where there are concerns from the perspective of sustainability. The Monitor applies the definition used by the Brundtland Commission for sustainable development, describing it as follows (p. 11):

“Sustainability concerns the scarcity of the resources used to generate welfare. The earth’s surface is finite, supplies of natural resources and the absorption capacity of the environment and atmosphere are finite. But a well-educated and healthy population, functioning social networks, public trust, machines and infrastructure, knowledge and other resources needed for sustainable welfare are also limited in supply. Because these resources are scarce, the sustainability of the present economic welfare is not self-evident; in other words, it is not guaranteed that the present level of welfare can continue to exist until the end of time. Governments therefore have a social responsibility to make and implement sustainability policies, aimed at using available resources in a responsible way. Following Brundtland’s definition, this means that if we use these resources now for our welfare, this must not be at the expense of the opportunities for people living elsewhere, and those yet to be born, to achieve welfare for themselves. More specifically, this means that people should use natural resources more efficiently; that they should conserve energy and biodiversity; and that they should invest in knowledge and education so that technology can be developed which will enable future generations to realise an acceptable level of welfare with a minimum use of scarce resources and fossil fuels. It also means that people should pay continued attention to improving the social fabric of the community in which they live and should promote trust and social participation.”

In the Monitor we selected a consistent set of indicators for 12 sustainability themes: Climate and energy; Biodiversity; Soil, air and water; Social participation; Trust; Labour utilisation; Education; Health; Physical capital; Knowledge; Distribution and inequality; and an International dimension (the global consequences of activities in the Netherlands). Together, these themes show whether—and to what extent—the Netherlands is moving in the right direction as far as sustainable development is concerned. The indicators can be followed over time, so that the ‘current status’ of sustainability can be established at regular intervals.

2 Social Aspects of Sustainability: Participation, Trust and Inequality

In 1999 the Dutch journal for the social sector (*Tijdschrift voor de Sociale Sector*) published a special issue on sustainability and social policy. At that time there was already a general recognition that the development of the sustainability concept, which started with ecology and economics, should also comprise a social aspect. It was as yet unclear what

this social aspect should entail, however. The insight that unrestrained consumption growth constituted a threat to the survival of the planet, the message of the Club of Rome in its report *The limits to growth* in 1972 (Meadows et al. 1972), was primarily restricted to the tension between ecological and economic goals at global level. The pursuit of economic prosperity was increasingly at odds with conservation of the quality of the environment, and also caused or perpetuated social inequality. A defining moment in sustainability thinking was the publication of the Brundtland Report *Our common future* in 1987, with the now well-known definition (and the basis of the present report): ‘sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs’. This definition puts the needs of citizens at the forefront of the discussion, and those needs are not necessarily only material ones. Sustainable development should be seen as a process which does not focus on economic development alone, but which also includes well-balanced ecological and social development. In fact, sustainable development refers to quality of life in the broadest possible sense. The difficult thing about the social aspect of sustainability is that it is layered (it pertains to both an individual and a collective level), and that it is reflexive (there is a continuous exchange between what we observe, how we interpret this, and how we behave). Added to this, in a social respect, too, sustainability is a process in which goals are frequently being adjusted, which makes it difficult to measure it with any precision.

A number of instrumental and intrinsic considerations make it easy to understand why the social aspects of sustainability deserve attention (de Boer and Duyvendak 1999). First, because at global level, environmental targets can only be realised if the West is prepared to invest in developing countries—and not only in commercial projects, but also in education, health care, poverty reduction and good government.

Secondly, it is clear that realising goals in the area of the environment and global fairness will to some extent hurt countries with prosperous economies. Thinking along these lines, trust in society, both between individual citizens and between people and government, works in favour of sustainability policy. One of the ways in which the social aspect can contribute to the realisation of economic and ecological goals is by creating public support. However, the social aspects of sustainability are not only functional; they are also important in an autonomous sense. A society where trust is inherent, where people feel safe, where social fabric, cohesion and engagement are all strong, and where in addition material security is guaranteed, is an attractive society for people to live in. This situation is beneficial for people’s physical and mental well-being, now and in the future. It also provides ample opportunities for a good start for future generations. Children who are able to grow up in a stable, safe and caring social environment have a greater chance of growing into balanced and socialised adults than children who are deprived of such advantages. In this respect, upbringing and the inter-generational transfer of norms and values are important aspects of social sustainability in society. To increase the opportunities for people to participate in society, education is crucial. If there is one thing that helps people to become self-sufficient and form discerning and well-informed opinions, it is good education. Education can promote active citizenship, if we define citizenship as the willingness and the ability to be part of a community and to contribute actively to that community. Access to good education is therefore an important resource for a sustainable society (Bijl and Boelhouwer 2009).

A society needs a sense of community and commitment; citizens need to feel involved with what happens in their society, to their co-citizens and in the world. In a disjointed society, it becomes very difficult for people to feel responsible for solving social problems and implementing proposed measures. The presence of social capital is very important for

the liveability of a community (Bijl et al. 2009). It is important to remember when using the term ‘social capital’ that a sense of belonging and being able to count on trust and tolerance can greatly benefit people in both the short and long term (Field 2003; Portes 1998). Putnam (2000), one of the most influential authors in this area, emphasises that unlike physical or human capital, social capital is not an individual characteristic, but refers to relationships between individuals—social networks and the norm of reciprocity and trustworthiness that these generate. Social capital is a characteristic of social networks, and the term refers to the relationships that exist within and between different social networks, through which members of one network can benefit from the knowledge, skills, authority etc. of another. By being part of networks that have good or useful relationships with other networks, an individual can develop further, or fulfil his/her potential in other ways. Putnam also points out the collective usefulness of social capital: social capital and social trust as a means of solving collective problems. Where people are confident that others will do their bit or do something in return, or will do so in the future, a group will be able to achieve more than if each group member were to behave rationally to serve only his or her own individual interests.

Like most other forms of capital, the amount of social capital may fluctuate; it can increase or decrease over time. This is interesting, because it means that in the long term, future societies may be better in a social respect (more trust, more participation, less inequality) than today’s. Ensuring social sustainability is thus not only a matter of ensuring that present social cohesion is preserved, but also ensuring that this cohesion will increase or improve. Although many discussions of social capital treat it as a good thing, Bourdieu posits that it may also be a means of maintaining or even intensifying social inequality (Bourdieu 1983). In his view, social capital explains how some people are in a position to gain access to economic or political power, while others are not. Elite groups exist in the community, which (sometimes consciously) do not want to be in contact, or have only very little contact, with other social groups, and which are perfectly able to develop both economically and otherwise. A community with only a limited level of social cohesion is therefore not by definition disadvantageous for all its members. On the other hand, social cohesion can also be excessive: if it excludes individuals or groups, for example. Moreover, not all social networks are equally desirable: consider football hooligans and terrorist groups for example. Although we could speak of bonding social capital, as the networks form a unit, there is no bridging social capital: they do not reciprocate. This is not to say that one form is by definition better than another, but it does indicate how complex and ambiguous the relationships between social capital, social networks and sustainability are.

Participating in community life is about equal opportunities and equal possibilities. In a certain sense, it is about fairness: the idea that everybody is entitled to a good life (Telos 2006). Solidarity is important in this respect. Solidarity between individuals is a precondition for trust and network formation, and solidarity between groups prevents inequality. In this respect institutions are important, as they provide access to resources.

In the Dutch welfare state, the government ensures that all its citizens have access to a variety of resources (education, care, income support), and prevents or tempers undesirable (i.e. excessively large) inequalities in these resources. A low level of solidarity and excessive inequality in a society will undermine the feeling of trust people have in each other, their willingness to participate and the formation of the networks which are necessary to realise social cohesion and social capital (Uslaner and Brown 2005; Telos 2006).

It should be borne in mind that the notions ‘social capital’ and ‘social cohesion’ have more powers of expression at local or national level than in global terms. The state of trust between individual citizens and between citizens and their government can be established

for a village, a city or even for a nation. The extent to which citizens contribute to a liveable community by engaging in voluntary work or other forms of social participation can also be established. These concepts become more diffuse at a global level, however. It is more difficult to conceive a liveable earth in a social respect—peace on earth probably being the ultimate goal—but this has never been achieved in the history of the human race. In addition, the means to realise more social capital and social cohesion on a world scale are more limited. International organisations such as the United Nations fulfil the role of proponent of mutual respect between countries and keeper of the peace and security in the world, but out of necessity this role is limited.

3 Challenges for Research on Social Sustainability

Several perspectives and topics can be derived from the foregoing which can open up relevant lines of research. The recurring ‘meta-themes’ in all these lines of research are *difference*, *inequality* and *future outlook*: what differences and inequalities can be recognised within and between groups, generations and countries? And what expectations can be formulated with regard to the opportunities and threats for the future?

Research could focus on sustainability in the general sense of (future) quality of life, but also on policy, behaviour, perceptions and social consequences with regard to sustainability in the more specific ecological (environmental) sense.

The following five research themes could serve as a starting point.

6. Quality of life, social capital and social cohesion in a longitudinal perspective.
7. ‘Sustainability of what, why and for whom?’ Sustainability as an issue of choice: trade-offs.
8. Civil society and governance aspects of sustainability.
9. Public perceptions, values and opinions with regard to sustainability issues.
10. Fairness and inequality in relation to sustainability policy, both nationally and internationally.

A few key words can be used to indicate which topics might be included in each research theme. The following is intended as a first step, which requires further detailing.

1. Quality of life, social capital and social cohesion in a longitudinal perspective
 - Measuring the current status of social cohesion and civil society: trends in trust, happiness, participation, volunteering. International comparisons: how do other countries compare with the Netherlands? What differences and inequalities can be observed within and between generations?
 - Scenario-based approach to quality of life: research into the mechanisms that are relevant for the development of quality of life and social cohesion in the future. There is currently no methodology based on scenarios and forecasting models.
 - Which stakeholders are relevant in sustainable development and what role do they or could they play? It is not just citizens and the government that are important: companies also have a key role to play in a socially sustainable society. Sustainable enterprise is a way of doing business which strikes a balance between economic, social and environmental interests. Sustainable businesses look not only at their profit and loss figures, but also at the consequences of their business activities for people and the environment—and not just the consequences of those activities today, but also in the

future. This is also referred to as corporate social responsibility: companies do what they can to solve the social and environmental problems associated with their business activities. This requires a willingness on the part of companies to act in a socially responsible way which goes beyond what the law and regulations demand.

2. 'Sustainability of what, why and for whom?' Sustainability as a choice issue: trade-offs

- The *Sustainability Monitor for the Netherlands 2009* stresses that interventions aimed at sustainability in one direction often demand a sacrifice or price in one or more other directions (trade-offs). For example, with regard to social capital and human capital, people's investment in social participation (caring for others, volunteering) contributes to non-material prosperity (cohesion in society, a 'caring' society', but means they are then not available to make that same investment in paid work. This can lead to loss of material prosperity. Conversely, while having older people work for longer may increase a country's material wealth, it reduces the scope for volunteering.
- Recognising, making explicit and analysing trade-offs in policy choices. What are the consequences of choices in the field of sustainability? For example, what does more sustainable production and consumption mean for economic growth and employment? What does the commitment to more volunteering mean for the labour market position and production of women and older people? To what extent do technological innovations in the field of sustainability lead to (more) social inequality, for example because of the high prices of new products? Are these trade-offs merely threats or do they also present opportunities?
- Green/sustainable consumption and the tensions between global and local markets. Consumer perceptions of globalised food chains. How do consumers deal with moral dilemmas concerning food production, and how do they express their moral views in their consumption practice? Meat production can serve as an example here: the negative aspects of meat production are becoming more and more widely known; how do consumers deal with this in their purchasing behaviour, and does this also have consequences for behaviour in relation to promoting animal welfare?
- Changes in eating out: there has been a gradual increase in the availability of organic/local/seasonal products in restaurants, influenced by consumer demand. However, tensions could arise between clients and providers in the choices to be made between the provenance of products (local versus global) and product quality (conventional versus organic).
- More sustainable choices for mobility and tourism. A trend can be observed towards sustainable tourism. However, the world is a global village and we are flying more and more. Where do the limits lie?
- Choice of green versus grey electricity. How credible are energy companies with their products? Are they concerned about the environment or only about sales? How many wind turbines can the Netherlands absorb from the perspective of horizon pollution?

3. Civil society and governance aspects of sustainability

- How are sustainability goals established (social goal-setting): through economic drivers or otherwise? What role do interest groups and stakeholders play in establishing sustainability and climate objectives? How does the government deal with environmental activism?

- Volunteering versus coercion and enforcement of sustainability measures. Role of the government (legislation and regulations, sanctions through the tax system) versus individual responsibility of citizens (modifying behaviour and lifestyles). Are citizens a driving force that can exert pressure on government and business (e.g. as consumers) to behave in a more sustainable way?
- Solidarity between generations: how willing are present generations to restrain their activities to improve the well-being of future generations?
- What new forms of governance are available or possible as a means of avoiding NIMBY behaviour by individual citizens and local communities?
- Sustainability is hardly ever the most important motive in the individual pursuit of welfare. There are a number of reasons for this. First of all, an individual person may not have enough information about the consequences of his actions. He may also consciously choose ‘here and now’ over ‘elsewhere and later’. Free-rider behaviour may also play a part: people who live according to sustainability principles make sacrifices from which others can benefit without having to do anything themselves; this reduces the willingness of the latter to adjust their behaviour. The same considerations apply to companies.
- To reconcile ‘here and now’ with ‘elsewhere and later’, binding agreements—including rules of play—and coordination—are needed. This is pre-eminently a task for the government, as it has the ability to create institutions which ensure that private individuals and businesses take into account the consequences of their actions that go beyond the ‘here and now’.
- In an international context, the government itself also benefits from coordination. Unilateral action by the Netherlands in favour of global sustainability burdens Dutch society with the costs, while other countries also benefit from this action. Finding solutions for these problems requires international agreements and institutions.

4. Public perceptions, values and opinions with regard to sustainability issues

- The role played by ‘risk’ in sustainability policy. An example is the recent BP oil spill in the Gulf of Mexico. The key here is often *power*, i.e. the imposition of/exposure to risks for the many (the population) in favour of the expected benefits for the few (the shareholders of the oil company). What role does the government play here? Such events can lead to scepticism and cynicism, or even to polarisation in relation to sustainability policy.
- Generally, people’s perceptions of climate change motivate their willingness to act. However, individuals have psychological barriers to their environmental actions, such as problems with acknowledging risk and coping with uncertainty, materialistic values, uncertainty about the existence of climate change and mistrust towards scientists or government officials. An understanding of these psychological mechanisms is relevant for the development of policy aimed at encouraging public participation in environmental politics, and in increasing their internal motivation to take responsibility with regard to local and global sustainability problems.
- The impact of advertising and the media on risk-awareness and solution pathways with regard to sustainability issues. ‘Media discourses and framing’: what information is filtered and in what way? And are citizens aware of this?

- Black sides of the climate debate: Information deficit due to propaganda and secrecy. Climate discussions are often *discourses of fear* in which doomsday scenarios are used to validate arguments.
 - Other differences in short-term and long-term risk-awareness and in the consequences that derive from this for different population groups? Does an awareness of the global sustainability problems lead to a ‘translation’ into people’s own situation?
5. Fairness and inequality in relation to sustainability policy, both nationally and internationally
- While solutions for climate change involve a lot of technical expertise, and the assessment of climate policies is very much economically driven with a striving towards effectiveness, strategies aimed at the mitigation and adaptation of global warming appear to be highly reflexive and their impact on quality of life remains unclear. National and international climate policies appear to cause national and international distributional effects that influence social inequality. It can be hypothesised that market-based solutions in climate policies increase individual income inequality, while state-oriented regulatory solutions affect income distribution more equally. Low-income groups are harmed most by climate policies, e.g. through mechanisms like housing insulation and car emission standards. It has been suggested that climate policies enacted through market strategies might cause even more inequality in countries without a generous welfare state.
 - environmental quality and human equality are two agendas. Environmental organisations often ignore the consequences of environmental/sustainability measures for human equality, ensuring a better quality of life now and in the future in a just and equal way.
 - Culture/climate change: migration, adaptation and re-settlement: can we expect to see *climate change refugees* within a few decades?

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